

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

BOARD ORDER NO. R6T-2004-0015
WDID NO. 6A099311007

**WASTE DISCHARGE REQUIREMENTS
FOR**

LAND DISPOSAL OF TREATED GROUND WATER

Lahontan Region _____

The California Regional Water Quality Control Board, Lahontan Region (Board) finds:

1. Justification for the General Order

Numerous unauthorized releases of petroleum product and chlorinated hydrocarbon pollutants have impacted ground waters of the Lahontan Region. Releases occur from leaking underground and aboveground fuel tanks and other unauthorized discharges.

Several treatment technologies currently employed for remediation include the extraction and aboveground treatment of ground water. Where other means of disposal are not available or practical, treated water may be proposed for discharge to land. Since treated water discharges from cleanup sites are often similar in nature, it is appropriate to regulate these dischargers with general Waste Discharge Requirements (WDRs). This general WDR expedites the process for discharges resulting from site cleanups.

The discharge of water from a ground water treatment unit to land is a discharge of waste that could affect the quality of the ground waters. This Order covers the discharge of treated ground water to land.

2. Permit History

Waste Discharge Requirements (WDRs) Board Order No. 6-93-106 were adopted on November 19, 1993. The Permit was amended September 9, 1999 to reflect changes in groundwater detection limits and effluent/discharge limitations for total petroleum hydrocarbons, methyl tertiary-butyl ether (MTBE), and tertiary butyl alcohol (TBA).

3. Reason for Action

Board Order No. 6-93-106 is being updated at this time to reflect changes in groundwater detection limits and effluent/discharge limitations for a number of constituents. Additionally, the monitoring and reporting program is being updated and streamlined.

4. California Environmental Quality Act Compliance

This update results in minor changes to detection limits and discharge limitations based on current technology and drinking water standards. Regional Board staff has determined that this action is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Title 14, California Code of Regulations, Chapter 3, Section 15308 (actions by regulatory agencies for protection of the environment). This change will not result in any adverse impacts to ground waters of the State. For the adoption of the Waste Discharge Requirements, Board Order No. 6-93-106, the Regional Board certified a negative declaration on November 19, 1993.

5. Issuance of the General Order

The responsible party(ies) and property owner, or solely the property owner, are considered to be the "Discharger" for the purposes of this Order. A complete Attachment A, Notice of Intent (NOI) must be filed by the Discharger for each proposed discharge to be covered by this Order. The NOI must include the appropriate filing fee. Information necessary to support the application is listed in Attachment B, "Information to Support Discharge of Treated Ground Water to Land." This Order shall only apply to Dischargers to whom a Notice of Applicability (NOA) has been issued by the Executive Officer. A NOA must be issued for each proposed discharge.

6. Wastewater Description

The primary pollutants covered by this Order are petroleum product and chlorinated hydrocarbon constituents. Petroleum product constituents include total petroleum hydrocarbons (measured as gasoline, diesel, kerosene, aviation fuel, fuel oil and heavier ranges of fuels and oils); benzene; toluene; xylene; ethylbenzene; tetraethyl lead, and gasoline oxygenates such as MTBE or ethanol. Other additives may also be present. Chlorinated hydrocarbons include trichloroethene, tetrachloroethene and their secondary degradation products. A complete list of constituents covered by this Order are included in the Discharge Specifications section of this Order.

7. Method of Discharge

Treated wastewater may either be disposed of by subsurface infiltration, surface infiltration trenches or basins, evaporation and/or percolation ponds, land spreading, spray disposal, or through irrigation of landscaping. This Order does not cover injection of treated wastewater directly to the ground water aquifer or discharge to surface waters or municipal wastewater collection systems.

8. Water Quality Control Plan

The Regional Board adopted Water Quality Control Plan for the Lahontan Region (Basin Plan), on March 31, 1995. This Permit implements this Plan, as amended.

9. Beneficial Uses

The beneficial uses of ground waters within the Lahontan Region as designated in the Basin Plan are:

- a. municipal and domestic supply
- b. industrial service supply
- c. agricultural supply
- d. freshwater replenishment

These beneficial uses apply to all ground waters of the Region except where lesser beneficial uses are designated in the Basin Plan.

10. Established Water Quality Standards

SWRCB Resolution No. 68-16

SWRCB Resolution No. 68-16 is a part of the Basin Plan for the Lahontan Region and describes a nondegradation policy for the waters of the State. Man-made fuel and solvent constituents are not naturally occurring, and thus pre-existing background concentrations of these constituents are considered nondetectable (below current analytical laboratory detection limits) in waters of the Region.

Existing Best Practicable Treatment (BPT) for the treatment of organic constituents in polluted water is capable of reliably removing most man-made constituents to nondetectable levels. The commonly achieved detection limits for these constituents in treated water are as follows:

Constituent	Detection Level	Units	Analytical Methods*
Total Petroleum	50	µg/l	EPA 8015
Hydrocarbons (C ₂ – C ₁₅)			
Total Petroleum	100	µg/l	EPA 8015
Hydrocarbons (C ₁₆ - C ₄₆)			
Benzene	0.1	µg/l	EPA 8260
Ethylbenzene	0.5	µg/l	EPA 8260
Toluene	0.5	µg/l	EPA 8260
Xylene	0.5	µg/l	EPA 8260
Methyl tertiary-butyl ether (MTBE)	0.5	µg/l	EPA 8260
Tertiary butyl alcohol (TBA)	5.0	µg/l	EPA 8260
TAME	0.5	µg/l	EPA 8260
DIPE	0.5	µg/l	EPA 8260
ETBE	0.5	µg/l	EPA 8260
Naphthalene	0.5	µg/l	EPA 8271
Methanol	5.0	µg/l	EPA 8260A
Ethanol	5.0	µg/l	EPA 8260A
Total Lead	1.0	µg/l	EPA 7000
Ethylene Dichloride (EDB)	0.02	µg/l	EPA 8011
1,2 Dichloroethane (1,2 DCA)	0.5	µg/l	EPA 8021
Trichloroethane (1,1,1 TCA)	0.5	µg/l	EPA 8021
Tetrachloroethene(PCE)	0.5	µg/l	EPA 8021
Trichloroethene (TCE)	0.5	µg/l	EPA 8021
Trans-1,2 Dichloroethene (Trans-1,2 DCE)	0.5	µg/l	EPA 8021
Cis-1,2 Dichloroethene (Cis-1,2 DCE)	0.5	µg/l	EPA 8021
1,1 Dichloroethene (1,1 DCE)	0.5	µg/l	EPA 8021
1,1 Dichloroethane (1,1 DCA)	0.5	µg/l	EPA 8021
1,1,2 Trichloroethane (1,1,2 TCA)	0.5	µg/l	EPA 8021
Vinyl Chloride	0.5	µg/l	EPA 8021

Alternative analytical methods that provide equivalent detection limits may be proposed in the Permit application or site specific Sampling and Analysis Plan.

Primary Drinking Water Standards

The State of California and/or the USEPA have set primary drinking water standards for the following hydrocarbon constituents as follows:

Constituent	Level	Units	Consideration
EDB	0.02	µg/l	Primary State of CA MCL
1,2 DCA	0.50	µg/l	Primary State of CA MCL
Benzene	1.0	µg/l	Primary State of CA MCL
Toluene	150	µg/l	Primary State of CA MCL
Xylenes	1750	µg/l	Primary State of CA MCL
Ethylbenzene	300	µg/l	Primary State of CA MCL
MTBE	13	µg/l	Primary State of CA MCL
TBA	12	µg/l	Primary State of CA MCL
Napthalene	170	µg/l	Primary State of CA MCL
Total Lead	15	µg/l	Primary State of CA MCL
PCE	5	µg/l	Primary State of CA MCL
TCE	5	µg/l	Primary State of CA MCL
1,1,1 TCA	200	µg/l	Primary State of CA MCL
trans-1,2 DCE	10	µg/l	Primary State of CA MCL
cis-1,2 DCE	6	µg/l	Primary State of CA MCL
1,1 DCE	6	µg/l	Primary State of CA MCL
1,1 DCA	5	µg/l	Primary State of CA MCL
1,1,2 TCA	32	µg/l	Primary State of CA MCL
Vinyl Chloride	0.5	ug/l	Primary State of CA MCL

Secondary Drinking Water Standards

The State of California has set secondary drinking water standards for taste and odor of all constituents at a maximum contaminant level of three threshold odor units (TOU), Section 64473, Title 22, of the California Code of Regulations. The Federal EPA has proposed secondary drinking water standards for a select group of constituents based on a three TOU concentration (Federal Register, Vol. 54, No. 97, pp. 22138, 22139). The following proposed secondary standards are lower than or equal to the primary drinking water standards set for these constituents by the State of California.

Constituent	Level	Units	Consideration
Total Petroleum	50	µg/l	Taste and Odor
Hydrocarbons (C ₂ -C ₁₅)			
Total Petroleum	100	µg/l	Taste and Odor
Hydrocarbons (C ₁₆ -C ₄₆)			
Toluene	42	µg/l	Taste and Odor
Ethylbenzene	29	µg/l	Taste and Odor
Total Xylenes	17	µg/l	Taste and Odor
MTBE	5	ug/l	Taste and Odor
Napthalene	21	ug/l	Taste and Odor
Methanol	740,000	ug/l	Taste and Odor
Ethanol	760,000	ug/l	Taste and Odor

EPA Health Advisory Levels

The USEPA has established Health Advisory levels for selected petroleum product constituents in ground water as follows:

Constituent	Level	Units	Consideration
Naphthalene	20	µg/l	Health Advisory
MTBE	35	µg/l	Health Advisory

11. Antidegradation Policy

The Regional Board has considered antidegradation pursuant to 40 CFR 131.12 and SWRCB Resolution No. 68-16 and finds that the subject discharges are consistent with the provisions of these policies. An antidegradation analysis is not necessary for this Permit. Discharges not consistent with the provisions of these policies and regulations are not covered by this general Permit.

12. Notification of Interested Parties

The Regional Board has notified the interested agencies and persons of its intent to prescribe WDRs in this general Order and has provided them with an opportunity for a public hearing and an opportunity to submit their written comments.

13. Consideration of Public Comments

The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger shall comply with the following:

I. DISCHARGE SPECIFICATIONS

A. Effluent/Discharge Limitations

Numerical effluent limitations listed below include 30-day median and daily maximum values. Thirty-day median concentration limits listed below are based on what is achievable by Best Practicable Treatment (BPT). BPT for petroleum and chlorinated hydrocarbon constituents is capable of reliably treating to below laboratory detection limits. Daily maximum values are based on established water quality standards that are protective of beneficial uses of ground and surface waters of the Lahontan Region. Thirty-day median values are to be calculated based on the analytical results of samples obtained over 30 successive days ("running 30-day median"). A sufficient number of samples must be collected and analyzed to demonstrate compliance with the effluent limitations.

Discharge Specifications of this Permit list the 30-day median effluent limitations of specific constituents to be monitored are listed in the NOA issued to the Discharger. If the analytical results of effluent sampling indicate a detectable concentration of a constituent that is listed in the NOA, then sufficient samples must be collected and analyzed during the ensuing 30 days to demonstrate compliance with the 30-day median effluent limitations. The running 30-day median time frame shall begin the day the sample containing a detectable concentration was collected. Any detected concentration above a daily maximum value listed in this Permit is a violation of the Permit.

1. The discharge of an effluent in excess of the following limits is prohibited. All samples of effluent are to be single grab samples.

30-day Daily Constituents	Units	Median	Maximum
Total Petroleum	µg/l	<50	100
Hydrocarbons (C ₂ -C ₄₆)			
Benzene	µg/l	<0.50	1.0
Toluene	µg/l	<0.50	42.0
Ethylbenzene	µg/l	<0.50	29.0
Total Xylenes	µg/l	<0.50	17.0
Total Lead	µg/l	<1.0*	15.0
Naphthalene	µg/l	<0.5	20
MTBE	µg/l	<0.5	5
TBA	µg/l	<5.0	12
EDB	µg/l	<0.02	0.02
1,2 DCA	µg/l	<0.50	0.50
1,1,1 TCA	µg/l	<0.50	200
PCE	µg/l	<0.50	5.0
TCE	µg/l	<0.50	5.0
Trans-1,2 DCE	µg/l	<0.50	10
Cis-1,2 DCE	µg/l	<0.50	6
1,1 DCE	µg/l	<0.50	6
1,1 DCA	µg/l	<0.50	5
1,1,2 TCA	µg/l	<0.50	32
vinyl chloride	ug/l	<0.50	0.50

- * This 30-day median limit could be set above 1.0 µg/l if the Discharger can demonstrate in the Permit Application that background Total Lead concentrations in the receiving water are greater than 1.0 µg/l. Any 30-day median limit allowed above 1.0 µg/l will be listed in the NOA. All samples for total lead are to be filtered samples.

2. The discharge shall not have a pH of less than 6.5 nor greater than 8.5.

B. Reclamation Requirements

All effluent made available for reclamation shall comply with standard Department of Health Services Reclamation Requirements as specified in Chapter 3, Division 4, Title 22 of the California Code of Regulations.

C. General Requirements and Discharge Prohibitions

1. All discharges covered by this Permit shall be limited to treated water from the investigation and remediation of identified or potential ground water pollution. This Permit shall apply only to discharges that meet the following conditions.
 - a. The identified pollutants have effluent limitations prescribed in this general Permit;
 - b. The treatment system is capable of reliably meeting all prescribed effluent limitations in this general Permit; and
 - c. The general water quality of the discharge is of equal to or better water quality than that of the receiving water. General water quality is to be determined as part of the Permit application process.

2. There shall be no discharge, bypass, or diversion of polluted or partially treated water, sludge, grease, oils, purge water, development water, or pump test water from the collection, transport, or disposal facilities to adjacent land areas or surface waters.
3. The discharge shall not cause pollution as defined in Section 13050 of the California Water Code, or a threatened pollution.
4. Neither the treatment nor the discharge shall cause a nuisance as defined in Section 13050 of the California Water Code.
5. The discharge of treated wastewater except to the disposal point(s) authorized in the NOA is prohibited.
6. The discharge shall not cause erosion of sediments.

II. PROVISIONS

A. Discharge Prohibitions

Discharges regulated by this Order are hereby exempt from the Discharge Prohibitions described in the Basin Plan where the Basin Plan provides for such exemptions.

B. Standard Provisions

The Discharger shall comply with the "Standard Provisions for NPDES Permits," in Attachment "C," which is made part of this Permit.

C. Monitoring and Reporting

1. Pursuant to the California Water Code Section 13267(b), the Discharger shall comply with the Monitoring and Reporting Program No. 2004-0015 as specified by the Executive Officer.
2. The Discharger shall comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of the Monitoring and Reporting Program.

D. Applicability

1. Wastewater remediated by the treatment unit may typically be generated from the following sources during the investigation and/or remediation of ground water pollution:
 - a. Ground water extracted from the underlying aquifer as part of the ground water remediation process.
 - b. Potentially polluted ground water generated during aquifer pump tests.
 - c. Potentially polluted well development water or purge water generated during ground water monitoring.
 - d. Other waste water generated during site investigations or cleanups.
2. This Permit does not pre-empt or supersede the authority of other agencies to prohibit, restrict, or control the discharge of treated ground water.

3. When individual Waste Discharge Requirements are issued to a Discharger otherwise subject to this Permit, the applicability of this Permit to the Discharger is automatically terminated on the effective date of the individual Permit.

E. Definitions

"Waste" as used in this Order includes, but is not limited to, any waste or waste constituent as defined in Section 13050 of the California Water Code, or Section 2601, Article 10, Chapter 15, Title 23, of the California Code of Regulations.

F. Operation and Maintenance

The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Permit. Pollutant-free wastewater may include rainfall, ground water, surface water, cooling waters, and condensates.

G. Notifications and Modifications

1. The Discharger shall identify all active water supply wells within a ¼ mile radius of the proposed discharge site and notify well owners at least 30 days prior to the discharge. Prior to discharge, the Discharger shall submit a list to the Regional Board of all well owners notified.
2. At least 180 days prior to making any change in the method of treatment or other factors which may affect the quality of the discharge, discharge point (Outfall), place of use, purpose of use of the wastewater, the Discharger shall file a new RWD. Any change in the character of the influent shall be reported to the Regional Board within 48 hours.
3. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Permit by letter. A copy of this letter should be immediately forwarded to this office.
4. The Discharger shall notify the Regional Board within 30 days when the clean-up activities are complete or the discharge will no longer occur. At that time the Executive Officer will consider withdrawal of the NOA. Once the NOA is withdrawn, the discharge will no longer be covered by this Permit and no discharge may occur prior to compliance with provisions of the California Water Code.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an NPDES Permit adopted by the California Regional Water Quality Control Board, Lahontan Region, on May 12, 2004.

HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments: A. Notice of Intent (NOI)
B. Information to Support Discharge of Treated Ground Water to Land
C. Standard Provisions for Waste Discharge Requirements